

WHAT IS CLAIMED IS:

1 1. A vehicle speed measuring apparatus for a vehicle
2 comprising:

3 vibration detection sensors for detecting vibrations from
4 a road surface through tires, the vibration detection sensors being
5 provided at front and rear wheel sides, respectively;

6 an input section through which the vibration detection
7 sensors input their detection values; and

8 a processing unit for calculating vehicle speed of the
9 vehicle based on a change pattern of the detection values inputted,
10 wherein the processing unit in order operates:

11 to feature extract a change pattern of the detection values
12 for the respective front and rear wheel sides by excluding inherent
13 tire influences on the detection values when the detection values
14 are inputted through the input section;

15 to execute pattern matching between the front and rear wheel
16 sides on the basis of the feature extracted change patterns of
17 the detection values;

18 to obtain a time difference from a coincidence of the change
19 patterns; and

20 to calculate vehicle speed based on the time difference and
21 a reference distance that is previously stored in the vehicle speed
22 measuring apparatus.

1 2. A vehicle speed measuring apparatus for a vehicle

2 according to claim 1, wherein the vibration detection sensors are
3 wheel speed sensors.

1 3. A vehicle speed measuring apparatus for a vehicle
2 according to claim 1, wherein the reference distance is a wheel
3 base of the vehicle.

1 4. A vehicle speed measuring apparatus for a vehicle
2 according to claim 2, wherein the reference distance is a wheel
3 base of the vehicle.